SEQUENCE LISTING

<110> Boehringer Ingelheim International GmbH

<120> Method for identifying compounds that modulate sister chromatid separation

<130> 0652.2290001

<140> To be assigned
<141> Herewith

<150> EP 01 101 252.3
<151> 2001-01-19

<150> US 60/297,440
<151> 2001-06-13

<160> 8

<170> PatentIn Ver. 2.1

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cctttccct agctctccgg tgtc atg agg agc ttc aaa aga gtc aac ttt 171
Met Arg Ser Phe Lys Arg Val Asn Phe
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ggg act ctg cta agc agc cag aag gag gct gaa gag ttg ctg ccc gac 219
Gly Thr Leu Leu Ser Ser Gln Lys Glu Ala Glu Glu Leu Leu Pro Asp
10 15 20 25

ttg aag gag ttc ctg tcc aac cct cca gct ggt ttt ccc agc agc cga 267
Leu Lys Glu Phe Leu Ser Asn Pro Pro Ala Gly Phe Pro Ser Ser Arg
30 35 40

tct gat gct gag agg aga caa gct tgt gat gcc atc ctg agg gct tgc 315
Ser Asp Ala Glu Arg Arg Gln Ala Cys Asp Ala Ile Leu Arg Ala Cys
45 50 55

aac cag cag ctg act gct aag cta gct tgc cct agg cat ctg ggg agc 363
Asn Gln Gln Leu Thr Ala Lys Leu Ala Cys Pro Arg His Leu Gly Ser
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ctg ctg gag ctg gca gag ctg gcc tgt gat ggc tac tta gtg tct acc   411
Leu Leu Glu Leu Ala Glu Leu Ala Cys Asp Gly Tyr Leu Val Ser Thr
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cca cag cgt cct ccc ctc tac ctg gaa cga att ctc ttt gtc tta ctg   459
Pro Gln Arg Pro Pro Leu Tyr Leu Glu Arg Ile Leu Phe Val Leu Leu
 90                  95                 100                 105

cgg aat gct gct gca caa gga agc cca gag gtc aca ctc cgc ctt gct   507
Arg Asn Ala Ala Ala Gln Gly Ser Pro Glu Val Thr Leu Arg Leu Ala
                110                 115                 120

cag ccc ctc cat gcc tgc ttg gtg cag tgc tct cgc gag gct gct ccc   555
Gln Pro Leu His Ala Cys Leu Val Gln Cys Ser Arg Glu Ala Ala Pro
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cag gac tat gag gcc gtg gct cgg ggc agc ttt tct ctg ctt tgg aag   603
Gln Asp Tyr Glu Ala Val Ala Arg Gly Ser Phe Ser Leu Leu Trp Lys
        140                 145                 150

ggg gca gaa gcc ctg ttg gaa cgg cga gct gca ttt gca gct cgg ctg   651
Gly Ala Glu Ala Leu Leu Glu Arg Arg Ala Ala Phe Ala Ala Arg Leu
    155                 160                 165

aag gcc ttg agc ttc cta gta ctc ttg gag gat gaa agt acc cct tgt   699
Lys Ala Leu Ser Phe Leu Val Leu Leu Glu Asp Glu Ser Thr Pro Cys
170                 175                 180                 185

gag gtt cct cac ttt gct tct cca aca gcc tgt cga gcg gta gct gcc   747
Glu Val Pro His Phe Ala Ser Pro Thr Ala Cys Arg Ala Val Ala Ala
                190                 195                 200

cat cag cta ttt gat gcc agt ggc cat ggt cta aat gaa gca gat gct   795
His Gln Leu Phe Asp Ala Ser Gly His Gly Leu Asn Glu Ala Asp Ala
            205                 210                 215

gat ttc cta gat gac ctg ctc tcc agg cac gtg atc aga gcc ttg gtg   843
Asp Phe Leu Asp Asp Leu Leu Ser Arg His Val Ile Arg Ala Leu Val
        220                 225                 230

ggt gag aga ggg agc tct tct ggg ctt ctt tct ccc cag agg gcc ctc   891
Gly Glu Arg Gly Ser Ser Ser Gly Leu Leu Ser Pro Gln Arg Ala Leu
    235                 240                 245

tgc ctc ttg gag ctc acc ttg gaa cac tgc cgt cgc ttt tgc tgg agc   939
Cys Leu Leu Glu Leu Thr Leu Glu His Cys Arg Arg Phe Cys Trp Ser
250                 255                 260                 265

cgc cac cat gac aaa gcc atc agc gca gtg gag aag gct cac agt tac   987
Arg His His Asp Lys Ala Ile Ser Ala Val Glu Lys Ala His Ser Tyr
                270                 275                 280

cta agg aac acc aat cta gcc cct agc ctt cag cta tgt cag ctg ggg   1035
Leu Arg Asn Thr Asn Leu Ala Pro Ser Leu Gln Leu Cys Gln Leu Gly
            285                 290                 295

gtt aag ctg ctg cag gtt ggg gag gaa gga cct cag gca gtg gcc aag   1083
Val Lys Leu Leu Gln Val Gly Glu Glu Gly Pro Gln Ala Val Ala Lys
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ctt ctg atc aag gca tca gct gtc ctg agc aag agt atg gag gca cca   1131
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Leu Leu Ile Lys Ala Ser Ala Val Leu Ser Lys Ser Met Glu Ala Pro
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tca ccc cca ctt cgg gca ttg tat gag agc tgc cag ttc ttc ctt tca   1179
Ser Pro Pro Leu Arg Ala Leu Tyr Glu Ser Cys Gln Phe Phe Leu Ser
330                 335                 340                 345

ggc ctg gaa cga ggc acc aag agg cgc tat aga ctt gat gcc att ctg   1227
Gly Leu Glu Arg Gly Thr Lys Arg Arg Tyr Arg Leu Asp Ala Ile Leu
                350                 355                 360

agc ctc ttt gct ttt ctt gga ggg tac tgc tct ctt ctg cag cag ctg   1275
Ser Leu Phe Ala Phe Leu Gly Gly Tyr Cys Ser Leu Leu Gln Gln Leu
            365                 370                 375

cgg gat gat ggt gtg tat ggg ggc tcc tcc aag caa cag cag tct ttt   1323
Arg Asp Asp Gly Val Tyr Gly Gly Ser Ser Lys Gln Gln Gln Ser Phe
        380                 385                 390

ctt cag atg tac ttt cag gga ctt cac ctc tac act gtg gtg gtt tat   1371
Leu Gln Met Tyr Phe Gln Gly Leu His Leu Tyr Thr Val Val Val Tyr
    395                 400                 405

gac ttt gcc caa ggc tgt cag ata gtt gat ttg gct gac ctg acc caa   1419
Asp Phe Ala Gln Gly Cys Gln Ile Val Asp Leu Ala Asp Leu Thr Gln
410                 415                 420                 425

cta gtg gac agt tgt aaa tct acc gtt gtc tgg atg ctg gag gcc tta   1467
Leu Val Asp Ser Cys Lys Ser Thr Val Val Trp Met Leu Glu Ala Leu
                430                 435                 440

gag ggc ctg tcg ggc caa gag ctg acg gac cac atg ggg atg acc gct   1515
Glu Gly Leu Ser Gly Gln Glu Leu Thr Asp His Met Gly Met Thr Ala
            445                 450                 455

tct tac acc agt aat ttg gcc tac agc ttc tat agt cac aag ctc tat   1563
Ser Tyr Thr Ser Asn Leu Ala Tyr Ser Phe Tyr Ser His Lys Leu Tyr
        460                 465                 470

gcc gag gcc tgt gcc atc tct gag ccg ctc tgt cag cac ctg ggt ttg   1611
Ala Glu Ala Cys Ala Ile Ser Glu Pro Leu Cys Gln His Leu Gly Leu
    475                 480                 485

gtg aag cca ggc act tat ccc gag gtg cct cct gag aag ttg cac agg   1659
Val Lys Pro Gly Thr Tyr Pro Glu Val Pro Pro Glu Lys Leu His Arg
490                 495                 500                 505

tgc ttc cgg cta caa gta gag agt ttg aag aaa ctg ggt aaa cag gcc   1707
Cys Phe Arg Leu Gln Val Glu Ser Leu Lys Lys Leu Gly Lys Gln Ala
                510                 515                 520

cag ggc tgc aag atg gtg att ttg tgg ctg gca gcc ctg caa ccc tgt   1755
Gln Gly Cys Lys Met Val Ile Leu Trp Leu Ala Ala Leu Gln Pro Cys
            525                 530                 535

agc cct gaa cac atg gct gag cca gtc act ttc tgg gtt cgg gtc aag   1803
Ser Pro Glu His Met Ala Glu Pro Val Thr Phe Trp Val Arg Val Lys
        540                 545                 550

atg gat gcg gcc agg gct gga gac aag gag cta cag cta aag act ctg   1851
Met Asp Ala Ala Arg Ala Gly Asp Lys Glu Leu Gln Leu Lys Thr Leu
    555                 560                 565
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cga gac agc ctc agt ggc tgg gac ccg gag acc ctg gcc ctc ctg ctg 1899

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Arg Asp Ser Leu Ser Gly Trp Asp Pro Glu Thr Leu Ala Leu Leu Leu
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agg gag gag ctg cag gcc tac aag gcg gtg cgg gcc gac act gga cag   1947
Arg Glu Glu Leu Gln Ala Tyr Lys Ala Val Arg Ala Asp Thr Gly Gln
                590                 595                 600

gaa cgc ttc aac atc atc tgt gac ctc ctg gag ctg agc ccc gag gag   1995
Glu Arg Phe Asn Ile Ile Cys Asp Leu Leu Glu Leu Ser Pro Glu Glu
            605                 610                 615

aca cca gcc ggg gcc tgg gca cga gcc acc cac ctg gta gaa ctg gct   2043
Thr Pro Ala Gly Ala Trp Ala Arg Ala Thr His Leu Val Glu Leu Ala
        620                 625                 630

cag gtg ctc tgc tac cac gac ttt acg cag cag acc aac tgc tct gct   2091
Gln Val Leu Cys Tyr His Asp Phe Thr Gln Gln Thr Asn Cys Ser Ala
    635                 640                 645

ctg gat gct atc cgg gaa gcc ctg cag ctt ctg gac tct gtg agg cct   2139
Leu Asp Ala Ile Arg Glu Ala Leu Gln Leu Leu Asp Ser Val Arg Pro
650                 655                 660                 665

gag gcc cag gcc aga gat cag ctt ctg gac gat aaa gca cag gcc ttg   2187
Glu Ala Gln Ala Arg Asp Gln Leu Leu Asp Asp Lys Ala Gln Ala Leu
                670                 675                 680

ctg tgg ctt tac atc tgt act ctg gaa gcc aaa ata cag gaa ggt atc   2235
Leu Trp Leu Tyr Ile Cys Thr Leu Glu Ala Lys Ile Gln Glu Gly Ile
            685                 690                 695

gag cgg gat cgg aga gcc cag gcc cct ggt aac ttg gag gaa ttt gaa   2283
Glu Arg Asp Arg Arg Ala Gln Ala Pro Gly Asn Leu Glu Glu Phe Glu
        700                 705                 710

gtc aat gac ctg aac tat gaa gat aaa ctc cag gaa gat cgt ttc cta   2331
Val Asn Asp Leu Asn Tyr Glu Asp Lys Leu Gln Glu Asp Arg Phe Leu
    715                 720                 725

tac agt aac att gcc ttc aac ctg gct gca gat gct gct cag tcc aaa   2379
Tyr Ser Asn Ile Ala Phe Asn Leu Ala Ala Asp Ala Ala Gln Ser Lys
730                 735                 740                 745

tgc ctg gac caa gcc ctg gcc ctg tgg aag gag ctg ctt aca aag ggg   2427
Cys Leu Asp Gln Ala Leu Ala Leu Trp Lys Glu Leu Leu Thr Lys Gly
                750                 755                 760

cag gcc cca gct gta cgg tgt ctc cag cag aca gca gcc tca ctg cag   2475
Gln Ala Pro Ala Val Arg Cys Leu Gln Gln Thr Ala Ala Ser Leu Gln
            765                 770                 775

atc cta gca gcc ctc tac cag ctg gtg gca aag ccc atg cag gct ctg   2523
Ile Leu Ala Ala Leu Tyr Gln Leu Val Ala Lys Pro Met Gln Ala Leu
        780                 785                 790

gag gtc ctc ctg ctg cta cgg att gtc tct gag aga ctg aag gac cac   2571
Glu Val Leu Leu Leu Leu Arg Ile Val Ser Glu Arg Leu Lys Asp His
    795                 800                 805

tcg aag gca gct ggc tcc tcc tgc cac atc acc cag ctc ctc ctg acc   2619
Ser Lys Ala Ala Gly Ser Ser Cys His Ile Thr Gln Leu Leu Leu Thr
810                 815                 820                 825
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ctc ggc tgt ccc agc tat gcc cag tta cac ctg gaa gag gca gca tcg   2667
Leu Gly Cys Pro Ser Tyr Ala Gln Leu His Leu Glu Glu Ala Ala Ser
                830                 835                 840

agc ctg aag cat ctc gat cag act act gac aca tac ctg ctc ctt tcc   2715
Ser Leu Lys His Leu Asp Gln Thr Thr Asp Thr Tyr Leu Leu Leu Ser
            845                 850                 855

ctg acc tgt gat ctg ctt cga agt caa ctc tac tgg act cac cag aag   2763
Leu Thr Cys Asp Leu Leu Arg Ser Gln Leu Tyr Trp Thr His Gln Lys
        860                 865                 870

gtg acc aag ggt gtc tct ctg ctg ctg tct gtg ctt cgg gat cct gcc   2811
Val Thr Lys Gly Val Ser Leu Leu Leu Ser Val Leu Arg Asp Pro Ala
    875                 880                 885

ctc cag aag tcc tcc aag gct tgg tac ttg ctg cgt gtc cag gtc ctg   2859
Leu Gln Lys Ser Ser Lys Ala Trp Tyr Leu Leu Arg Val Gln Val Leu
890                 895                 900                 905

cag ctg gtg gca gct tac ctt agc ctc ccg tca aac aac ctc tca cac   2907
Gln Leu Val Ala Ala Tyr Leu Ser Leu Pro Ser Asn Asn Leu Ser His
                910                 915                 920

tcc ctg tgg gag cag ctc tgt gcc caa ggc tgg cag aca cct gag ata   2955
Ser Leu Trp Glu Gln Leu Cys Ala Gln Gly Trp Gln Thr Pro Glu Ile
            925                 930                 935

gct ctc ata gac tcc cat aag ctc ctc cga agc atc atc ctc ctg ctg   3003
Ala Leu Ile Asp Ser His Lys Leu Leu Arg Ser Ile Ile Leu Leu Leu
        940                 945                 950

atg ggc agt gac att ctc tca act cag aaa gca gct gtg gag aca tcg   3051
Met Gly Ser Asp Ile Leu Ser Thr Gln Lys Ala Ala Val Glu Thr Ser
    955                 960                 965

ttt ttg gac tat ggt gaa aat ctg gta caa aaa tgg cag gtt ctt tca   3099
Phe Leu Asp Tyr Gly Glu Asn Leu Val Gln Lys Trp Gln Val Leu Ser
970                 975                 980                 985

gag gtg ctg agc tgc tca gag aag ctg gtc tgc cac ctg ggc cgc ctg   3147
Glu Val Leu Ser Cys Ser Glu Lys Leu Val Cys His Leu Gly Arg Leu
                990                 995                1000

ggt agt gtg agt gaa gcc aag gcc ttt tgc ttg gag gcc cta aaa ctt   3195
Gly Ser Val Ser Glu Ala Lys Ala Phe Cys Leu Glu Ala Leu Lys Leu
            1005                1010                1015

aca aca aag ctg cag ata cca cgc cag tgt gcc ctg ttc ctg gtg ctg   3243
Thr Thr Lys Leu Gln Ile Pro Arg Gln Cys Ala Leu Phe Leu Val Leu
        1020                1025                1030

aag ggc gag ctg gag ctg gcc cgc aat gac att gat ctc tgt cag tcg   3291
Lys Gly Glu Leu Glu Leu Ala Arg Asn Asp Ile Asp Leu Cys Gln Ser
    1035                1040                1045

gac ctg cag cag gtt ctg ttc ttg ctt gag tct tgc aca gag ttt ggt   3339
Asp Leu Gln Gln Val Leu Phe Leu Leu Glu Ser Cys Thr Glu Phe Gly
1050                1055                1060                1065
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ggg gtg act cag cac ctg gac tct gtg aag aag gtc cac ctg cag aag   3387
Gly Val Thr Gln His Leu Asp Ser Val Lys Lys Val His Leu Gln Lys
               1070                1075                1080

ggg aag cag cag gcc cag gtc ccc tgt cct cca cag ctc cca gag gag   3435
Gly Lys Gln Gln Ala Gln Val Pro Cys Pro Pro Gln Leu Pro Glu Glu
           1085                1090                1095

gag ctc ttc cta aga ggc cct gct cta gag ctg gtg gcc act gtg gcc   3483
Glu Leu Phe Leu Arg Gly Pro Ala Leu Glu Leu Val Ala Thr Val Ala
       1100                1105                1110

aag gag cct ggc ccc ata gca cct tct aca aac tcc tcc cca gtc ttg   3531
Lys Glu Pro Gly Pro Ile Ala Pro Ser Thr Asn Ser Ser Pro Val Leu
   1115                1120                1125

aaa acc aag ccc cag ccc ata ccc aac ttc ctg tcc cat tca ccc acc   3579
Lys Thr Lys Pro Gln Pro Ile Pro Asn Phe Leu Ser His Ser Pro Thr
1130                1135                1140                1145

tgt gac tgc tcg ctc tgc gcc agc cct gtc ctc aca gca gtc tgt ctg   3627
Cys Asp Cys Ser Leu Cys Ala Ser Pro Val Leu Thr Ala Val Cys Leu
               1150                1155                1160

cgc tgg gta ttg gtc acg gca ggg gtg agg ctg gcc atg ggc cac caa   3675
Arg Trp Val Leu Val Thr Ala Gly Val Arg Leu Ala Met Gly His Gln
           1165                1170                1175

gcc cag ggt ctg gat ctg ctg cag gtc gtg ctg aag ggc tgt cct gaa   3723
Ala Gln Gly Leu Asp Leu Leu Gln Val Val Leu Lys Gly Cys Pro Glu
       1180                1185                1190

gcc gct gag cgc ctc acc caa gct ctc caa gct tcc ctg aat cat aaa   3771
Ala Ala Glu Arg Leu Thr Gln Ala Leu Gln Ala Ser Leu Asn His Lys
   1195                1200                1205

aca ccc ccc tcc ttg gtt cca agc ctc ttg gat gag atc ttg gct caa   3819
Thr Pro Pro Ser Leu Val Pro Ser Leu Leu Asp Glu Ile Leu Ala Gln
1210                1215                1220                1225

gca tac aca ctg ttg gca ctg gag ggc ctg aac cag cca tca aac gag   3867
Ala Tyr Thr Leu Leu Ala Leu Glu Gly Leu Asn Gln Pro Ser Asn Glu
               1230                1235                1240

agc ctg cag aag gtt cta cag tca ggg ctg aag ttt gta gca gca cgg   3915
Ser Leu Gln Lys Val Leu Gln Ser Gly Leu Lys Phe Val Ala Ala Arg
           1245                1250                1255

ata ccc cac cta gag ccc tgg cga gcc agc ctg ctc ttg att tgg gcc   3963
Ile Pro His Leu Glu Pro Trp Arg Ala Ser Leu Leu Leu Ile Trp Ala
       1260                1265                1270

ctc aca aaa cta ggt ggc ctc agc tgc tgt act acc caa ctt ttt gca   4011
Leu Thr Lys Leu Gly Gly Leu Ser Cys Cys Thr Thr Gln Leu Phe Ala
   1275                1280                1285

agc tcc tgg ggc tgg cag cca cca tta ata aaa agt gtc cct ggc tca   4059
Ser Ser Trp Gly Trp Gln Pro Pro Leu Ile Lys Ser Val Pro Gly Ser
1290                1295                1300                1305


gag ccc tct aag act cag ggc caa aaa cgt tct gga cga ggg cgc caa   4107
Glu Pro Ser Lys Thr Gln Gly Gln Lys Arg Ser Gly Arg Gly Arg Gln
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aag tta gcc tct gct ccc ctg agc ctc aat aat acc tct cag aaa ggt   4155
Lys Leu Ala Ser Ala Pro Leu Ser Leu Asn Asn Thr Ser Gln Lys Gly
            1325                1330                1335

ctg gaa ggt aga gga ctg ccc tgc aca cct aaa ccc cca gac cgg atc   4203
Leu Glu Gly Arg Gly Leu Pro Cys Thr Pro Lys Pro Pro Asp Arg Ile
        1340                1345                1350

agg caa gct ggc cct cat gtc ccc ttc acg gtg ttt gag gaa gtc tgc   4251
Arg Gln Ala Gly Pro His Val Pro Phe Thr Val Phe Glu Glu Val Cys
    1355                1360                1365

cct aca gag agc aag cct gaa gta ccc cag gcc ccc agg gta caa cag   4299
Pro Thr Glu Ser Lys Pro Glu Val Pro Gln Ala Pro Arg Val Gln Gln
1370                1375                1380                1385

aga gtc cag acg cgc ctc aag gtg aac ttc agt gat gac agt gac ttg   4347
Arg Val Gln Thr Arg Leu Lys Val Asn Phe Ser Asp Asp Ser Asp Leu
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gaa gac cct gtc tca gct gag gcc tgg ctg gca gag gag cct aag aga   4395
Glu Asp Pro Val Ser Ala Glu Ala Trp Leu Ala Glu Glu Pro Lys Arg
            1405                1410                1415

cgg ggc act gct tcc cgg ggc cgg ggg cga gca agg aag ggc ctg agc   4443
Arg Gly Thr Ala Ser Arg Gly Arg Gly Arg Ala Arg Lys Gly Leu Ser
        1420                1425                1430

cta aag acg gat gcc gtg gtt gcc cca ggt agt gcc cct ggg aac cct   4491
Leu Lys Thr Asp Ala Val Val Ala Pro Gly Ser Ala Pro Gly Asn Pro
    1435                1440                1445

ggc ctg aat ggc agg agc cgg agg gcc aag aag gtg gca tca aga cat   4539
Gly Leu Asn Gly Arg Ser Arg Arg Ala Lys Lys Val Ala Ser Arg His
1450                1455                1460                1465

tgt gag gag cgg cgt ccc cag agg gcc agt gac cag gcc agg cct ggc   4587
Cys Glu Glu Arg Arg Pro Gln Arg Ala Ser Asp Gln Ala Arg Pro Gly
                1470                1475                1480

cct gag atc atg agg acc atc cct gag gaa gaa ctg act gac aac tgg   4635
Pro Glu Ile Met Arg Thr Ile Pro Glu Glu Glu Leu Thr Asp Asn Trp
            1485                1490                1495

aga aaa atg agc ttt gag atc ctc agg ggc tct gac ggg gaa gac tca   4683
Arg Lys Met Ser Phe Glu Ile Leu Arg Gly Ser Asp Gly Glu Asp Ser
        1500                1505                1510

gcc tca ggt ggg aag act cca gct ccg ggc cct gag gca gct tct gga   4731
Ala Ser Gly Gly Lys Thr Pro Ala Pro Gly Pro Glu Ala Ala Ser Gly
    1515                1520                1525

gaa tgg gag ctg ctg agg ctg gat tcc agc aag aag aag ctg ccc agc   4779
Glu Trp Glu Leu Leu Arg Leu Asp Ser Ser Lys Lys Lys Leu Pro Ser
1530                1535                1540                1545

cca tgc cca gac aag gag agt gac aag gac ctt ggt cct cgg ctc cag   4827
Pro Cys Pro Asp Lys Glu Ser Asp Lys Asp Leu Gly Pro Arg Leu Gln
                1550                1555                1560
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ctc ccc tca gcc ccc gta gcc act ggt ctt tct acc ctg gac tcc atc 4875
Leu Pro Ser Ala Pro Val Ala Thr Gly Leu Ser Thr Leu Asp Ser Ile
1565 1570 1575

tgt gac tcc ctg agt gtt gct ttc cgg ggc att agt cac tgt cct cct 4923
Cys Asp Ser Leu Ser Val Ala Phe Arg Gly Ile Ser His Cys Pro Pro
1580 1585 1590

agt ggg ctc tat gcc cac ctc tgc cgc ttc ctg gcc ttg tgc ctg ggc 4971
Ser Gly Leu Tyr Ala His Leu Cys Arg Phe Leu Ala Leu Cys Leu Gly
1595 1600 1605

cac cgg gat cct tat gcc act gct ttc ctt gtc acc gag tct gtc tcc 5019
His Arg Asp Pro Tyr Ala Thr Ala Phe Leu Val Thr Glu Ser Val Ser
1610 1615 1620 1625

atc acc tgt cgc cac cag ctg ctc acc cac ctc cac aga cag ctc agc 5067
Ile Thr Cys Arg His Gln Leu Leu Thr His Leu His Arg Gln Leu Ser
1630 1635 1640

aag gcc cag aag cac cga gga tca ctt gaa ata gca gac cag ctg cag 5115
Lys Ala Gln Lys His Arg Gly Ser Leu Glu Ile Ala Asp Gln Leu Gln
1645 1650 1655

ggg ctg agc ctt cag gag atg cct gga gat gtc ccc ctg gcc cgc atc 5163
Gly Leu Ser Leu Gln Glu Met Pro Gly Asp Val Pro Leu Ala Arg Ile
1660 1665 1670

cag cgc ctc ttt tcc ttc agg gct ttg gaa tct ggc cac ttc ccc cag 5211
Gln Arg Leu Phe Ser Phe Arg Ala Leu Glu Ser Gly His Phe Pro Gln
1675 1680 1685

cct gaa aag gag agt ttc cag gag cgc ctg gct ctg atc ccc agt ggg 5259
Pro Glu Lys Glu Ser Phe Gln Glu Arg Leu Ala Leu Ile Pro Ser Gly
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gtg act gtg tgt gtg ttg gcc ctg gcc acc ctc cag ccc gga acc gtg 5307
Val Thr Val Cys Val Leu Ala Leu Ala Thr Leu Gln Pro Gly Thr Val
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Gly Asn Thr Leu Leu Leu Thr Arg Leu Glu Lys Asp Ser Pro Pro Val
1725 1730 1735

agt gtg cag att ccc act ggc cag aac aag ctt cat ctg cgt tca gtc 5403
Ser Val Gln Ile Pro Thr Gly Gln Asn Lys Leu His Leu Arg Ser Val
1740 1745 1750

ctg aat gag ttt gat gcc atc cag aag gca cag aaa gag aac agc agc 5451
Leu Asn Glu Phe Asp Ala Ile Gln Lys Ala Gln Lys Glu Asn Ser Ser
1755 1760 1765

tgt act gac aag cga gaa tgg tgg aca ggg cgg ctg gca ctg gac cac 5499
Cys Thr Asp Lys Arg Glu Trp Trp Thr Gly Arg Leu Ala Leu Asp His
1770 1775 1780 1785

agg atg gag gtt ctc atc gct tcc cta gag aag tct gtg ctg ggc tgc 5547
Arg Met Glu Val Leu Ile Ala Ser Leu Glu Lys Ser Val Leu Gly Cys
1790 1795 1800

tgg aag ggg ctg ctg ctg ccg tcc agt gag gag ccc ggc cct gcc cag 5595
Trp Lys Gly Leu Leu Leu Pro Ser Ser Glu Glu Pro Gly Pro Ala Gln

1805 1810 1815

gag gcc tcc cgc cta cag gag ctg cta cag gac tgt ggc tgg aaa tat 5643
Glu Ala Ser Arg Leu Gln Glu Leu Leu Gln Asp Cys Gly Trp Lys Tyr
1820 1825 1830

cct gac cgc act ctg ctg aaa atc atg ctc agt ggt gcc ggt gcc ctc 5691
Pro Asp Arg Thr Leu Leu Lys Ile Met Leu Ser Gly Ala Gly Ala Leu
1835 1840 1845

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Thr Pro Gln Asp Ile Gln Ala Leu Ala Tyr Gly Leu Cys Pro Thr Gln
1850 1855 1860 1865

cca gag cga gcc cag gag ctc ctg aat gag gca gta gga cgt cta cag 5787
Pro Glu Arg Ala Gln Glu Leu Leu Asn Glu Ala Val Gly Arg Leu Gln
1870 1875 1880

ggc ctg aca gta cca agc aat agc cac ctt gtc ttg gtc cta gac aag 5835
Gly Leu Thr Val Pro Ser Asn Ser His Leu Val Leu Val Leu Asp Lys
1885 1890 1895

gac ttg cag aag ctg ccg tgg gaa agc atg ccc agc ctc caa gca ctg 5883
Asp Leu Gln Lys Leu Pro Trp Glu Ser Met Pro Ser Leu Gln Ala Leu
1900 1905 1910

cct gtc acc cgg ctg ccc tcc ttc cgc ttc cta ctc agc tac tcc atc 5931
Pro Val Thr Arg Leu Pro Ser Phe Arg Phe Leu Leu Ser Tyr Ser Ile
1915 1920 1925

atc aaa gag tat ggg gcc tcg cca gtg ctg agt caa ggg gtg gat cca 5979
Ile Lys Glu Tyr Gly Ala Ser Pro Val Leu Ser Gln Gly Val Asp Pro
1930 1935 1940 1945

cga agt acc ttc tat gtc ctg aac cct cac aat aac ctg tca agc aca 6027
Arg Ser Thr Phe Tyr Val Leu Asn Pro His Asn Asn Leu Ser Ser Thr
1950 1955 1960

gag gag caa ttt cga gcc aat ttc agc agt gaa gct ggc tgg aga gga 6075
Glu Glu Gln Phe Arg Ala Asn Phe Ser Ser Glu Ala Gly Trp Arg Gly
1965 1970 1975

gtg gtt ggg gag gtg cca aga cct gaa cag gtg cag gaa gcc ctg aca 6123
Val Val Gly Glu Val Pro Arg Pro Glu Gln Val Gln Glu Ala Leu Thr
1980 1985 1990

aag cat gat ttg tat atc tat gca ggg cat ggg gct ggt gcc cgc ttc 6171
Lys His Asp Leu Tyr Ile Tyr Ala Gly His Gly Ala Gly Ala Arg Phe
1995 2000 2005

ctt gat ggg cag gct gtc ctg cgg ctg agc tgt cgg gca gtg gcc ctg 6219
Leu Asp Gly Gln Ala Val Leu Arg Leu Ser Cys Arg Ala Val Ala Leu
2010 2015 2020 2025

ctg ttt ggc tgt agc agt gcg gcc ctg gct gtg cat gga aac ctg gag 6267
Leu Phe Gly Cys Ser Ser Ala Ala Leu Ala Val His Gly Asn Leu Glu
2030 2035 2040

ggg gct ggc atc gtg ctc aag tac atc atg gct ggt tgc ccc ttg ttt 6315
Gly Ala Gly Ile Val Leu Lys Tyr Ile Met Ala Gly Cys Pro Leu Phe
2045 2050 2055

ctg ggt aat ctc tgg gat gtg act gac cgc gac att gac cgc tac acg 6363
Leu Gly Asn Leu Trp Asp Val Thr Asp Arg Asp Ile Asp Arg Tyr Thr
2060 2065 2070

gaa gct ctg ctg caa ggc tgg ctt gga gca ggc cca ggg gcc ccc ctt 6411
Glu Ala Leu Leu Gln Gly Trp Leu Gly Ala Gly Pro Gly Ala Pro Leu
2075 2080 2085

ctc tac tat gta aac cag gcc cgc caa gct ccc cga ctc aag tat ctt 6459
Leu Tyr Tyr Val Asn Gln Ala Arg Gln Ala Pro Arg Leu Lys Tyr Leu
2090 2095 2100 2105

att ggg gct gca cct ata gcc tat ggc ttg cct gtc tct ctg cgg taa 6507
Ile Gly Ala Ala Pro Ile Ala Tyr Gly Leu Pro Val Ser Leu Arg
2110 2115 2120

ccccatggag ctgtcttatt gatgctagaa gcctcataac tgttctacct ccaaggttag 6567

atttaatcct taggataact cttttaaagt gattttcccc agtgttttat atgaaacatt 6627

tccttttgat ttaacctcag tataataaag atacatcatt t 6668

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Lys Glu Ala Glu Glu Leu Leu Pro Asp Leu Lys Glu Phe Leu Ser Asn
20 25 30

Pro Pro Ala Gly Phe Pro Ser Ser Arg Ser Asp Ala Glu Arg Arg Gln
35 40 45

Ala Cys Asp Ala Ile Leu Arg Ala Cys Asn Gln Gln Leu Thr Ala Lys
50 55 60

Leu Ala Cys Pro Arg His Leu Gly Ser Leu Leu Glu Leu Ala Glu Leu
65 70 75 80

Ala Cys Asp Gly Tyr Leu Val Ser Thr Pro Gln Arg Pro Pro Leu Tyr
85 90 95

Leu Glu Arg Ile Leu Phe Val Leu Leu Arg Asn Ala Ala Ala Gln Gly
100 105 110

Ser Pro Glu Val Thr Leu Arg Leu Ala Gln Pro Leu His Ala Cys Leu
115 120 125

Val Gln Cys Ser Arg Glu Ala Ala Pro Gln Asp Tyr Glu Ala Val Ala
130 135 140

Arg Gly Ser Phe Ser Leu Leu Trp Lys Gly Ala Glu Ala Leu Leu Glu
145 150 155 160

Arg Arg Ala Ala Phe Ala Ala Arg Leu Lys Ala Leu Ser Phe Leu Val
165 170 175

Leu Leu Glu Asp Glu Ser Thr Pro Cys Glu Val Pro His Phe Ala Ser
180 185 190

Pro Thr Ala Cys Arg Ala Val Ala Ala His Gln Leu Phe Asp Ala Ser
195 200 205

Gly His Gly Leu Asn Glu Ala Asp Ala Asp Phe Leu Asp Asp Leu Leu
210 215 220

Ser Arg His Val Ile Arg Ala Leu Val Gly Glu Arg Gly Ser Ser Ser
225 230 235 240

Gly Leu Leu Ser Pro Gln Arg Ala Leu Cys Leu Leu Glu Leu Thr Leu
245 250 255

Glu His Cys Arg Arg Phe Cys Trp Ser Arg His His Asp Lys Ala Ile
260 265 270

Ser Ala Val Glu Lys Ala His Ser Tyr Leu Arg Asn Thr Asn Leu Ala
275 280 285

Pro Ser Leu Gln Leu Cys Gln Leu Gly Val Lys Leu Leu Gln Val Gly
290 295 300

Glu Glu Gly Pro Gln Ala Val Ala Lys Leu Leu Ile Lys Ala Ser Ala
305 310 315 320

Val Leu Ser Lys Ser Met Glu Ala Pro Ser Pro Pro Leu Arg Ala Leu
325 330 335

Tyr Glu Ser Cys Gln Phe Phe Leu Ser Gly Leu Glu Arg Gly Thr Lys
340 345 350

Arg Arg Tyr Arg Leu Asp Ala Ile Leu Ser Leu Phe Ala Phe Leu Gly
355 360 365

Gly Tyr Cys Ser Leu Leu Gln Gln Leu Arg Asp Asp Gly Val Tyr Gly
370 375 380

Gly Ser Ser Lys Gln Gln Gln Ser Phe Leu Gln Met Tyr Phe Gln Gly
385 390 395 400

Leu His Leu Tyr Thr Val Val Val Tyr Asp Phe Ala Gln Gly Cys Gln
405 410 415

Ile Val Asp Leu Ala Asp Leu Thr Gln Leu Val Asp Ser Cys Lys Ser
420 425 430

Thr Val Val Trp Met Leu Glu Ala Leu Glu Gly Leu Ser Gly Gln Glu
435 440 445

Leu Thr Asp His Met Gly Met Thr Ala Ser Tyr Thr Ser Asn Leu Ala
450 455 460

Tyr Ser Phe Tyr Ser His Lys Leu Tyr Ala Glu Ala Cys Ala Ile Ser
465 470 475 480

Glu Pro Leu Cys Gln His Leu Gly Leu Val Lys Pro Gly Thr Tyr Pro
485 490 495

Glu Val Pro Pro Glu Lys Leu His Arg Cys Phe Arg Leu Gln Val Glu
500 505 510

Ser Leu Lys Lys Leu Gly Lys Gln Ala Gln Gly Cys Lys Met Val Ile
515 520 525

Leu Trp Leu Ala Ala Leu Gln Pro Cys Ser Pro Glu His Met Ala Glu
530 535 540

Pro Val Thr Phe Trp Val Arg Val Lys Met Asp Ala Ala Arg Ala Gly
545 550 555 560

Asp Lys Glu Leu Gln Leu Lys Thr Leu Arg Asp Ser Leu Ser Gly Trp
565 570 575

Asp Pro Glu Thr Leu Ala Leu Leu Leu Arg Glu Glu Leu Gln Ala Tyr
580 585 590

Lys Ala Val Arg Ala Asp Thr Gly Gln Glu Arg Phe Asn Ile Ile Cys
595 600 605

Asp Leu Leu Glu Leu Ser Pro Glu Glu Thr Pro Ala Gly Ala Trp Ala
610 615 620

Arg Ala Thr His Leu Val Glu Leu Ala Gln Val Leu Cys Tyr His Asp
625 630 635 640

Phe Thr Gln Gln Thr Asn Cys Ser Ala Leu Asp Ala Ile Arg Glu Ala
645 650 655

Leu Gln Leu Leu Asp Ser Val Arg Pro Glu Ala Gln Ala Arg Asp Gln
660 665 670

Leu Leu Asp Asp Lys Ala Gln Ala Leu Leu Trp Leu Tyr Ile Cys Thr
675 680 685

Leu Glu Ala Lys Ile Gln Glu Gly Ile Glu Arg Asp Arg Arg Ala Gln
690 695 700

Ala Pro Gly Asn Leu Glu Glu Phe Glu Val Asn Asp Leu Asn Tyr Glu
705 710 715 720

Asp Lys Leu Gln Glu Asp Arg Phe Leu Tyr Ser Asn Ile Ala Phe Asn
725 730 735

Leu Ala Ala Asp Ala Ala Gln Ser Lys Cys Leu Asp Gln Ala Leu Ala
740 745 750

Leu Trp Lys Glu Leu Leu Thr Lys Gly Gln Ala Pro Ala Val Arg Cys
755 760 765

Leu Gln Gln Thr Ala Ala Ser Leu Gln Ile Leu Ala Ala Leu Tyr Gln
770 775 780

Leu Val Ala Lys Pro Met Gln Ala Leu Glu Val Leu Leu Leu Leu Arg
785 790 795 800

Ile Val Ser Glu Arg Leu Lys Asp His Ser Lys Ala Ala Gly Ser Ser
805 810 815

Cys His Ile Thr Gln Leu Leu Leu Thr Leu Gly Cys Pro Ser Tyr Ala
820 825 830

Gln Leu His Leu Glu Glu Ala Ala Ser Ser Leu Lys His Leu Asp Gln

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        835                 840                 845

Thr Thr Asp Thr Tyr Leu Leu Leu Ser Leu Thr Cys Asp Leu Leu Arg
    850                 855                 860

Ser Gln Leu Tyr Trp Thr His Gln Lys Val Thr Lys Gly Val Ser Leu
865                 870                 875                 880

Leu Leu Ser Val Leu Arg Asp Pro Ala Leu Gln Lys Ser Ser Lys Ala
                885                 890                 895

Trp Tyr Leu Leu Arg Val Gln Val Leu Gln Leu Val Ala Ala Tyr Leu
            900                 905                 910

Ser Leu Pro Ser Asn Asn Leu Ser His Ser Leu Trp Glu Gln Leu Cys
        915                 920                 925

Ala Gln Gly Trp Gln Thr Pro Glu Ile Ala Leu Ile Asp Ser His Lys
    930                 935                 940

Leu Leu Arg Ser Ile Ile Leu Leu Leu Met Gly Ser Asp Ile Leu Ser
945                 950                 955                 960

Thr Gln Lys Ala Ala Val Glu Thr Ser Phe Leu Asp Tyr Gly Glu Asn
                965                 970                 975

Leu Val Gln Lys Trp Gln Val Leu Ser Glu Val Leu Ser Cys Ser Glu
            980                 985                 990

Lys Leu Val Cys His Leu Gly Arg Leu Gly Ser Val Ser Glu Ala Lys
        995                1000                1005

Ala Phe Cys Leu Glu Ala Leu Lys Leu Thr Thr Lys Leu Gln Ile Pro
   1010                1015                1020

Arg Gln Cys Ala Leu Phe Leu Val Leu Lys Gly Glu Leu Glu Leu Ala
1025                1030                1035                1040

Arg Asn Asp Ile Asp Leu Cys Gln Ser Asp Leu Gln Gln Val Leu Phe
               1045                1050                1055

Leu Leu Glu Ser Cys Thr Glu Phe Gly Gly Val Thr Gln His Leu Asp
           1060                1065                1070

Ser Val Lys Lys Val His Leu Gln Lys Gly Lys Gln Gln Ala Gln Val
       1075                1080                1085

Pro Cys Pro Pro Gln Leu Pro Glu Glu Glu Leu Phe Leu Arg Gly Pro
   1090                1095                1100

Ala Leu Glu Leu Val Ala Thr Val Ala Lys Glu Pro Gly Pro Ile Ala
1105                1110                1115                1120


Pro Ser Thr Asn Ser Ser Pro Val Leu Lys Thr Lys Pro Gln Pro Ile
               1125                1130                1135

Pro Asn Phe Leu Ser His Ser Pro Thr Cys Asp Cys Ser Leu Cys Ala
           1140                1145                1150

Ser Pro Val Leu Thr Ala Val Cys Leu Arg Trp Val Leu Val Thr Ala
       1155                1160                1165
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Gly Val Arg Leu Ala Met Gly His Gln Ala Gln Gly Leu Asp Leu Leu
   1170                1175                1180

Gln Val Val Leu Lys Gly Cys Pro Glu Ala Ala Glu Arg Leu Thr Gln
1185                1190                1195                1200

Ala Leu Gln Ala Ser Leu Asn His Lys Thr Pro Pro Ser Leu Val Pro
                1205                1210                1215

Ser Leu Leu Asp Glu Ile Leu Ala Gln Ala Tyr Thr Leu Leu Ala Leu
            1220                1225                1230

Glu Gly Leu Asn Gln Pro Ser Asn Glu Ser Leu Gln Lys Val Leu Gln
        1235                1240                1245

Ser Gly Leu Lys Phe Val Ala Ala Arg Ile Pro His Leu Glu Pro Trp
    1250                1255                1260

Arg Ala Ser Leu Leu Leu Ile Trp Ala Leu Thr Lys Leu Gly Gly Leu
1265                1270                1275                1280

Ser Cys Cys Thr Thr Gln Leu Phe Ala Ser Ser Trp Gly Trp Gln Pro
                1285                1290                1295

Pro Leu Ile Lys Ser Val Pro Gly Ser Glu Pro Ser Lys Thr Gln Gly
            1300                1305                1310

Gln Lys Arg Ser Gly Arg Gly Arg Gln Lys Leu Ala Ser Ala Pro Leu
        1315                1320                1325

Ser Leu Asn Asn Thr Ser Gln Lys Gly Leu Glu Gly Arg Gly Leu Pro
    1330                1335                1340

Cys Thr Pro Lys Pro Pro Asp Arg Ile Arg Gln Ala Gly Pro His Val
1345                1350                1355                1360

Pro Phe Thr Val Phe Glu Glu Val Cys Pro Thr Glu Ser Lys Pro Glu
                1365                1370                1375

Val Pro Gln Ala Pro Arg Val Gln Gln Arg Val Gln Thr Arg Leu Lys
            1380                1385                1390

Val Asn Phe Ser Asp Asp Ser Asp Leu Glu Asp Pro Val Ser Ala Glu
        1395                1400                1405

Ala Trp Leu Ala Glu Glu Pro Lys Arg Arg Gly Thr Ala Ser Arg Gly
    1410                1415                1420

Arg Gly Arg Ala Arg Lys Gly Leu Ser Leu Lys Thr Asp Ala Val Val
1425                1430                1435                1440

Ala Pro Gly Ser Ala Pro Gly Asn Pro Gly Leu Asn Gly Arg Ser Arg
                1445                1450                1455

Arg Ala Lys Lys Val Ala Ser Arg His Cys Glu Glu Arg Arg Pro Gln
            1460                1465                1470

Arg Ala Ser Asp Gln Ala Arg Pro Gly Pro Glu Ile Met Arg Thr Ile
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Pro Glu Glu Glu Leu Thr Asp Asn Trp Arg Lys Met Ser Phe Glu Ile
    1490                1495                1500
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Leu Arg Gly Ser Asp Gly Glu Asp Ser Ala Ser Gly Gly Lys Thr Pro
1505 1510 1515 1520

Ala Pro Gly Pro Glu Ala Ala Ser Gly Glu Trp Glu Leu Leu Arg Leu
1525 1530 1535

Asp Ser Ser Lys Lys Lys Leu Pro Ser Pro Cys Pro Asp Lys Glu Ser
1540 1545 1550

Asp Lys Asp Leu Gly Pro Arg Leu Gln Leu Pro Ser Ala Pro Val Ala
1555 1560 1565

Thr Gly Leu Ser Thr Leu Asp Ser Ile Cys Asp Ser Leu Ser Val Ala
1570 1575 1580

Phe Arg Gly Ile Ser His Cys Pro Pro Ser Gly Leu Tyr Ala His Leu
1585 1590 1595 1600

Cys Arg Phe Leu Ala Leu Cys Leu Gly His Arg Asp Pro Tyr Ala Thr
1605 1610 1615

Ala Phe Leu Val Thr Glu Ser Val Ser Ile Thr Cys Arg His Gln Leu
1620 1625 1630

Leu Thr His Leu His Arg Gln Leu Ser Lys Ala Gln Lys His Arg Gly
1635 1640 1645

Ser Leu Glu Ile Ala Asp Gln Leu Gln Gly Leu Ser Leu Gln Glu Met
1650 1655 1660

Pro Gly Asp Val Pro Leu Ala Arg Ile Gln Arg Leu Phe Ser Phe Arg
1665 1670 1675 1680

Ala Leu Glu Ser Gly His Phe Pro Gln Pro Glu Lys Glu Ser Phe Gln
1685 1690 1695

Glu Arg Leu Ala Leu Ile Pro Ser Gly Val Thr Val Cys Val Leu Ala
1700 1705 1710

Leu Ala Thr Leu Gln Pro Gly Thr Val Gly Asn Thr Leu Leu Leu Thr
1715 1720 1725

Arg Leu Glu Lys Asp Ser Pro Pro Val Ser Val Gln Ile Pro Thr Gly
1730 1735 1740

Gln Asn Lys Leu His Leu Arg Ser Val Leu Asn Glu Phe Asp Ala Ile
1745 1750 1755 1760

Gln Lys Ala Gln Lys Glu Asn Ser Ser Cys Thr Asp Lys Arg Glu Trp
1765 1770 1775

Trp Thr Gly Arg Leu Ala Leu Asp His Arg Met Glu Val Leu Ile Ala
1780 1785 1790

Ser Leu Glu Lys Ser Val Leu Gly Cys Trp Lys Gly Leu Leu Leu Pro
1795 1800 1805

Ser Ser Glu Glu Pro Gly Pro Ala Gln Glu Ala Ser Arg Leu Gln Glu
1810 1815 1820

Leu Leu Gln Asp Cys Gly Trp Lys Tyr Pro Asp Arg Thr Leu Leu Lys
1825 1830 1835 1840

Ile Met Leu Ser Gly Ala Gly Ala Leu Thr Pro Gln Asp Ile Gln Ala
1845 1850 1855

Leu Ala Tyr Gly Leu Cys Pro Thr Gln Pro Glu Arg Ala Gln Glu Leu
1860 1865 1870

Leu Asn Glu Ala Val Gly Arg Leu Gln Gly Leu Thr Val Pro Ser Asn
1875 1880 1885

Ser His Leu Val Leu Val Leu Asp Lys Asp Leu Gln Lys Leu Pro Trp
1890 1895 1900

Glu Ser Met Pro Ser Leu Gln Ala Leu Pro Val Thr Arg Leu Pro Ser
1905 1910 1915 1920

Phe Arg Phe Leu Leu Ser Tyr Ser Ile Ile Lys Glu Tyr Gly Ala Ser
1925 1930 1935

Pro Val Leu Ser Gln Gly Val Asp Pro Arg Ser Thr Phe Tyr Val Leu
1940 1945 1950

Asn Pro His Asn Asn Leu Ser Ser Thr Glu Glu Gln Phe Arg Ala Asn
1955 1960 1965

Phe Ser Ser Glu Ala Gly Trp Arg Gly Val Val Gly Glu Val Pro Arg
1970 1975 1980

Pro Glu Gln Val Gln Glu Ala Leu Thr Lys His Asp Leu Tyr Ile Tyr
1985 1990 1995 2000

Ala Gly His Gly Ala Gly Ala Arg Phe Leu Asp Gly Gln Ala Val Leu
2005 2010 2015

Arg Leu Ser Cys Arg Ala Val Ala Leu Leu Phe Gly Cys Ser Ser Ala
2020 2025 2030

Ala Leu Ala Val His Gly Asn Leu Glu Gly Ala Gly Ile Val Leu Lys
2035 2040 2045

Tyr Ile Met Ala Gly Cys Pro Leu Phe Leu Gly Asn Leu Trp Asp Val
2050 2055 2060

Thr Asp Arg Asp Ile Asp Arg Tyr Thr Glu Ala Leu Leu Gln Gly Trp
2065 2070 2075 2080

Leu Gly Ala Gly Pro Gly Ala Pro Leu Leu Tyr Tyr Val Asn Gln Ala
2085 2090 2095

Arg Gln Ala Pro Arg Leu Lys Tyr Leu Ile Gly Ala Ala Pro Ile Ala
2100 2105 2110

Tyr Gly Leu Pro Val Ser Leu Arg
2115 2120

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caactgtcca ctagttgggt cagg 24

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